

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-289632

(43)Date of publication of application : 27.10.1998

(51)Int.Cl. H01H 13/14  
B29D 31/00  
H01H 11/00  
H01H 13/48  
// B29K101:12

(21)Application number : 09-110105 (71)Applicant : POLYMERTECH KK

(22)Date of filing : 14.04.1997 (72)Inventor : NAKAJO MASARU  
OOKIDANI TAKESHI  
KUDO SATOSHI

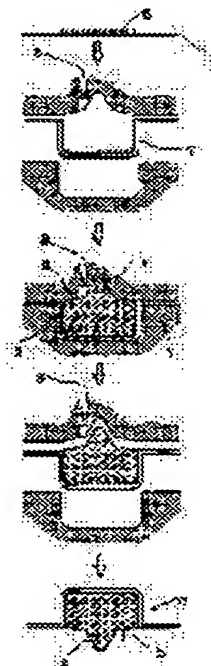
## (54) SHEET KEY TOP AND ITS MANUFACTURE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To improve clicking sensation and prevent contact parts from being damaged by residual stress by providing a gate injection port of a thermoplastic material in a side part of a pressing element or a side thrusting element formed in a metal mold so as to perform injection and setting the tip shape of the pressing element of a pushbutton switch for pushing a bent contact part such as a metal disc spring into a spherical shape.

**SOLUTION:** A film 1 having a print surface 6 on which a display part is printed

beforehand is set in a metal mold having a pressing element 2 whose tip shape is spherical and a thermoplastic material 3 is injected and molded after closing so as to be integrally molded with the film 7. In this case, a gate injection port 8 is provided in the side part of the pressing element 2 having the spherical tip or a side thrusting element part 5 formed in a metal mold and the thermoplastic material 3 is injected therein so that the tip shape of the pressing element 2 is formed into a spherical



**BEST AVAILABLE COPY**

shape. The lives of the contact parts of the metal disc spring, the resin film dome, etc., are thus elongated by forming the tip part of the pressing element 2 into the spherical shape and the positioning process of the sheet key top and the contact parts can be facilitated thereby.

---

## LEGAL STATUS

[Date of request for examination] 08.04.2004

[Date of sending the examiner's  
decision of rejection]

[Kind of final disposal of application  
other than the examiner's decision  
of rejection or application  
converted registration]

[Date of final disposal for  
application]

[Patent number]

[Date of registration]

[Number of appeal against  
examiner's decision of rejection]

[Date of requesting appeal against  
examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office